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Unification, Agency, Systemization, Intuition: My Art Making Process and Ideas

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Unification, Agency, Systemization, Intuition: My Art Making Process and Ideas

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Fine Arts at Virginia Commonwealth University.

by

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TABLE OF CONTENTS

Abstract

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This essay is an attempt to describe my ideas about my work, my process, and my philosophy of art by examining five of the major pieces I created during the pursuit of a Master of Fine Arts degree at Virginia Commonwealth University. I will discuss the pieces in chronological order, first providing a description of the works' salient characteristics, then delving into both my specific thoughts about the work as well as the background ideas that were pertinent to me during my process of creation.

Introduction

This essay is an attempt to describe my ideas about my work, my process, and my philosophy of art by examining five of the major pieces I created during the pursuit of a Master of Fine Arts degree at Virginia Commonwealth University (VCU). I will discuss the pieces in chronological order. For each piece I will provide a description of the work's salient characteristics, then delve into both my specific thoughts about the work as well as the background ideas that were pertinent to me during my process of creation. But ideas are like time; they are always about to be and always just were, but they are never fully and absolutely present. I want to present coherent arguments as much as possible, so I primarily articulate ideas that have been with me for a while. At the end of the essay, I fling these thoughts through the present and into the future, grappling with ideas that I recognize as melting silhouettes without solidified materiality.

Observation Window

Description

Observation Window was a performative collaboration between Charli Brissey, a fellow Kinetic Imaging MFA student, and me. It was performed three times from December 7-13, 2012 at 423 West Broad Street, Richmond, VA. Documentation of the performances may be found here: https://www.youtube.com/watch?v=CMmqSJGA5zw

Charli Brissey choreographed and performed movement in the storefront window of a vacant building on one of the busiest streets in Richmond, VA. A projection surface was

stretched across the back of the storefront ledge, trapping Charli in that space for the duration of the performance. A ghostly white image of Charli's body was projected onto the surface, following and replicating her movements in real-time. The performance activated a public space, demanding attention from an unsuspecting audience of commuters, shoppers, and students. The movement may have evoked ideas of the body as commodity and animal, with the quasi-magical translation of the body's form manifested as light and subject to digital manipulations including time-delay and distortion. A brief essay co-written by Charli and me describes some of the concepts that arose from the piece:

> In today's culture, the presentation of a female body abstracted by digital media is more comfortable than the confrontation of a stranger's body in a public environment. The piece *Observation Window* presents a dichotomy between the form and movements of a female body presented to an unsuspecting, exterior, public audience as an object of display, and the digital abstraction of the same form and movements as they appear to a voluntary, interior audience.
>
> From an urban sidewalk, the audience sees a woman performing in an enclosed display window with a shadow of her form projected onto a screen behind her. The body's presence in this unusual location solicits the audience to confront their presumptions about the female figure in public. The performer vacillates between exploring the dual characterizations of the body as an animal and the body as a commodity. The light projection behind her highlights the commodification of the female figure, enhancing each movement regardless of the performer's intent.
>
> Similarly, the audience is free to explore the duality of the exterior and interior version's of the piece by choosing to enter the gallery and viewing the performance from the opposite side of the projection screen. Since the physical body is no longer viewable, the elegant and mystical abstraction of the body's silhouette is a more comfortable perspective for the audience, replicating the experience of the female form through digital media. Another duality is formed by the primal character of rhythmic and noisy music, which is only audible from inside the gallery.

During the performance, in addition to controlling the progression of the projected light's various manipulations of Charli's image, I also improvised a live musical performance performed over loudspeakers. Using the software / programming interface Max/MSP/Jitter

(Max), I created a virtual instrument for the performance of found-object music samples as loops. The music was layered and rhythmic, with around eight separate looped samples sounding at any given time. The loops were between two and twenty seconds long and often repeated for about five or six minute each, slowly changing in loop duration, volume, tempo, and pitch. As one loop would fade out, another would come in to take its place.

Comments

Multi-sensory art

As my first completed piece during my MFA studies at VCU, *Observation Window* represents both the continuation and application of many creative and technological ideas developed earlier, as well as the beginning of several interests that propelled my graduate work. *Observation Window* was a multi-sensory experience, breaking away from the staid academic music culture I was reacting against. It extended into multiple mediums in part by being a cross-medium collaboration, something which was new and challenging for me.

Having previously attained Bachelor of Music and Master of the Arts degrees in music composition, one of my goals for my MFA studies at VCU was to create multi-sensory, multimedia work. I was frustrated by the inhuman experience of academic music concerts. Concerts with acoustic instruments are rigidly formulaic and built on performative concepts from the 1800s. Performers wearing tidy and professional clothing take to a bland stage while being applauded, bow to acknowledge the audience's welcome, seriously perform the music only moving their bodies as necessary to physically activate their instruments, bow again to applause, and exit stage right. Unbelievably, computer music concerts are even worse. They are usually staged in the same way as acoustic music performances, except with the addition of a pair of loudspeakers and a computer on a desk. For fixed media work the lights are turned off, which at

least mercifully allows the audience to ignore their life-sapping surroundings. When the music is "performed," the composer / performer sits on the stage with his (an utterly male-dominated culture) face obscured by the laptop, making minute gestures with the mouse and keyboard. All this time, of course, the audience is expected to sit perfectly still in total silence and complete focus. The music has to be incredibly good to not put me to sleep.

For perhaps apparent reasons, the only people that ever show up to performances like these are those participating. And, inevitably, the performances are always tied to academic festivals and conferences. It is the epitome of the ivory tower, and I would describe it as insular, isolated, obscure, onanistic, and sick. We are creatures that see and hear and smell and touch and move and interact. Expecting us to turn off all but one of our senses and yet remain in touch with ourselves is ridiculous. I want to make things that acknowledge the humanness of the audience. They should be multi-sensory and presented outside of a stage setting. This was a primary inspiration for undertaking a project like *Observation Window*.

Collaborating with Charli, whose background is in dance, was an excellent way to accomplish this. But collaboration in general was relatively new to me. I was used to working in isolation, following a creative process developed over the past decade, and with total command over the final outcome of the work. Working with Charli, I had to cede some control, which is not easy for me. However, perhaps since we had only recently met, we did not creatively intrude upon each other's domains. She choreographed the movements that made sense to her, and I designed the light and sound that I wanted. Discussion about what we were creatively intending was minimal. We never really talked about our intentions for the piece or what we thought the result might be until after the performance was over. Instead, the development of the work was focused around what was made possible by the new technologies I

was experimenting with. It was up to me to make the technology work, and up to Charli to create movement that would utilize the technological product.

Technology as process

The technological setup was the other primary interest for me. To track Charli's movements, I used her infrared silhouette. An infrared emitter was set up outside the storefront, pointing in at Charli. Infrared light is invisible, because it is at lower wavelengths than we can see. It was blocked by Charli, but passed through the projection surface behind her, reaching a near-infrared black and white camera with a filter blocking out visible light. This video signal was brought into the Max programming environment, where the program compared each current frame to an original frame in which Charli was not in the space at all. Every pixel that was above a certain threshold of difference from the original turned white, thus producing a ghostly video silhouette of Charli. This video was then aligned and scaled to match Charli, and projected back on to the projection surface.

Another form of complex technology at use was the virtual instrument I programmed in Max to allow me to improvise with music sample loops. I have worked with found-object media samples for a decade, but usually as fixed media compositions. On three or four occasions, I had improvised with them in various ways, usually by triggering them with a keyboard. Using computer programming to create my art was relatively new to me. However, it would become a large part of my practice during my MFA studies.

Working with new media technology like this energizes me. It gives me control over the tools of digital art making, so that I can try to create things which are, at least superficially if not deeply, different than anything I've seen before. There's also an air of prideful superiority that accompanies the successful use of new technology, because the results are almost magical to

many people who are not familiar with how they are accomplished. We frequently associate technological development with the fetishes of wealth and power, perhaps because of the Silicon Valley phenomenon. Magical fantasy and power fetish are not of explicit interest to me, but it's hard to deny that they may affect my interest in new technology. I also have an affinity for engineering and analytical thinking, which will be discussed at length in this essay.

The Architecture Sings

Description

The Architecture Sings was a solo performance of music and virtual space. I performed it in the *Art6* gallery on May 5, 2013. A projection of a virtual space was displayed on a portrait-orientation projection screen hung in the middle of a large room from a second-floor balcony.

The audience was positioned on both sides of the projection screen, facing inward. In the landing of an open stairwell connecting the two levels, I sat at a table with a microphone, keyboard and mouse. I sang into the microphone which amplified my voice and sent the audio signal to the computer, while also using the mouse and keyboard to navigate the perspective of the virtual space and control the predefined structure of the piece. A video of the performance of the virtual space can be found here: https://www.youtube.com/watch?v=0EdT6CR4TgA

The primary element of the piece was the relationship between my singing and the virtual space. When I sang or made noise of any kind into the microphone, predefined architectural structures made up of component cubes were activated, responding to the sound input. It is audio visualization in virtual space. Technically, the audio signal of my voice was spectrally analyzed in Max, determining the amplitude (volume) of the audio across the audible range of frequencies (pitches) in the sound spectrum. This data was then sent to another program called the Unreal Development Kit (UDK) which is a real-time graphics engine created for videogame development. In *The Architecture Sings,* UDK was used to generate the virtual space in which the cubes are rendered. Each cube is assigned the numeric amplitude measurement of one of the frequencies. The amplitude can then be mapped to various properties of the cube, such as scale (size), translation (position in 3D space), speed of rotation, color etc. In most cases in *The Architecture Sings,* amplitude is mapped to scale.

Aesthetically, the virtual space was stark and basic. The projected perspective in the space seemed to hover in the middle of emptiness. The horizon was mostly black, with wisps of slowly moving gray to provide a sense of depth. The cubes were unelaborated primitive shapes colored a pale grayish-white. Movement through the piece and the virtual space was slow and methodical. In contrast, my semi-improvised, wordless song was human and imperfect. The

human voice is inherently intimate, contrasting it immediately with the bland geometry of the virtual environment. The song began in a controlled musical style, but as the piece progressed it evolved into organic vocal gestures, such as laughing and sighing.

Comments

The Architecture Sings is as much about the design of the multimedia instrument of sound and virtual space as it is about the performance itself. The idea of a multimedia instrument has occupied my thoughts for some time. In many ways, the impulse is similar to the motive behind *Observation Window*, as it stems from a desire to break away from the visually uninspired performances of academic music. Instead of performers staring at laptops, I want experimental electronic music to be performed in a visually appealing and interesting way to engage the audience. More than that, though, I see multimedia instruments as an excellent opportunity for unifying the various aspects of the audience's experience.

Unification of performance

The Architecture Sings attempts to unify the experience of sound and virtual environment. The system clearly articulates a direct relationship between the performed sound and the resulting virtual architecture. The experience of the sound and the architecture are presented as a bundle which would be severely diminished in isolation. The song and the architecture serve as vehicles for developing the artistic concepts present in one another. The song attempts to illuminate the characteristics and possibilities of the virtual architecture, which in turn inspire the development of the song. Perhaps some level of aesthetic connection is also made by melding the drab and basic forms of the cubes with the inherent intimacy of the unaffected human voice.

The desire for cross-medium unification arose from a frustration with the limitations of academic and classical musical performance. When watching the performance of a symphony, I understand that the reason I'm there is to listen to the music. But I am distracted by the suits the performers wear, the stage they stand on, the architecture of the hall, the shape of the instruments they play, the motions they enact to activate the instruments, etc. During the performance, I am occupied by some of the bits of the experience usually considered entirely extraneous, such as the feel of the chair I'm sitting in, the temperature and humidity of the room, and the weight in my stomach and aftertaste in my mouth of my recently consumed dinner. Sometimes I'm able to focus on the music and pretend that the other things don't matter, but they're always affecting my experience. I want them to be just as much a part of the piece as the sound.

Definition of instrument

We generally use the word instrument to talk about the classically accepted oeuvre of physical musical instruments, like pianos, violins, clarinets, and trumpets. Using virtual environments as instruments is a challenge to this traditional definition. Questioning the bounds of the definition is useful for me to consider new ways I can employ well-established performance techniques.

Breaking away from the traditional classical orchestra, Luigi Russolo and the futurists made instruments of noise. Varese used a siren as an instrument. In the mid-20th century, classical music instruments became 'extended' so that using them in unconventional ways became acceptable as music. Today, anything and everything that makes sound can be considered an instrument in the academic music world. The advancement of electronics has also expanded the definition of an instrument. There's not much trouble in accepting the digital

keyboard as instrument, because it looks like a piano and can sound like traditional instruments, even though sound is not physically produced.

In computer music, new virtual software instruments are being developed every day which pose all sorts of challenges to the idea of how we relate to an instrument. What is the mechanism of control? Which parameters of the output are a fundamental characteristic of the instrument rather than the way it is played? What if the instrument makes use of the computer's ability to enact a random process or create emergent artificial intelligence? Many of these challenges were pertinent to the development of my instrument. They helped me create my own definition of an instrument as having three fundamental properties.

First, an instrument must be capable of real-time creation. Without real-time output, the device is a tool for composition rather than an instrument of performance. The mechanism of control in the instrument I built for *The Architecture Sings* directly affects its ability to function in real-time. I chose to use a mouse, computer keyboard, and microphone, for practical reasons. The mouse and computer keyboard allowed me to navigate the virtual environment in a way that was familiar to me from my experience with videogames. The microphone translated the performance of my live singing into the virtual space. But I was never completely happy with those controls. They lacked visual interest for the audience, because they didn't require me to move my body at all. They also didn't push me to find new ways to transport the perspective through the virtual space so that I might use the space as an instrument rather than as a game environment.

Second, an instrument must allow for a breadth of artistic expression. This is the difference between an instrument and a tool (or an instrument for music/art and an instrument of medical science). For example, the play button on a CD player allows for a direct correlation

between input and output, just like a single key on a digital keyboard plays a specific sound. But if there is only one key, or one play button, the tool is very limited as an instrument because of its inability to express a wide range of ideas or emotions. In contrast, a traditional music instrument has numerous pitches that are able to be individually activated at a wide range of tone and amplitude. This portion of my definition of an instrument is the most flexible and has the most gray area, because it creates a spectrum between instrument and tool rather than a binary.

To give my instrument a breadth of expression in the virtual space, I struggled with which parameters of control over that environment I should be able to control in real-time. In developing traditional music instruments, there is a well-established predetermined baseline shared across most instruments - the discrete pitch set of the equal tempered twelve-tone scale. Each instrument differs in its timbre, tone quality, range, etc, but it must be capable of producing those pitches. The instruments are designed to allow the performer to quickly alternate between those pitches. But there is no commonly accepted base of predetermined qualities for an instrument of virtual space. Should all instruments of virtual space use cubes like music instruments use pitches? That seems arbitrary and silly. Maybe color, or the perspective of the virtual space should be made analogous to pitch. I never answered this question satisfactorily. I lacked a way to modulate the relationship between my voice and the activation of the architecture in real-time, limiting the breadth of expression to the innate qualities of my voice and their one-to-one articulation in the scale of the cubes.

The third property that a tool must have to become an effective instrument is a direct, discrete, understandable, and perceivable correlation between input and output. For example, if a piano key is pushed, it is absolutely certain which pitch will result. The player can also learn the relationship between the speed of pressing the key and the volume and tone quality of the

note. If the piano key resulted in any number of other, randomly chosen pitches sounding, I do not believe that would be an instrument. However, if the key on the piano was assigned a specific sound sample rather than a pitch, and every time the key was pressed the sound sample played, it would be an instrument.

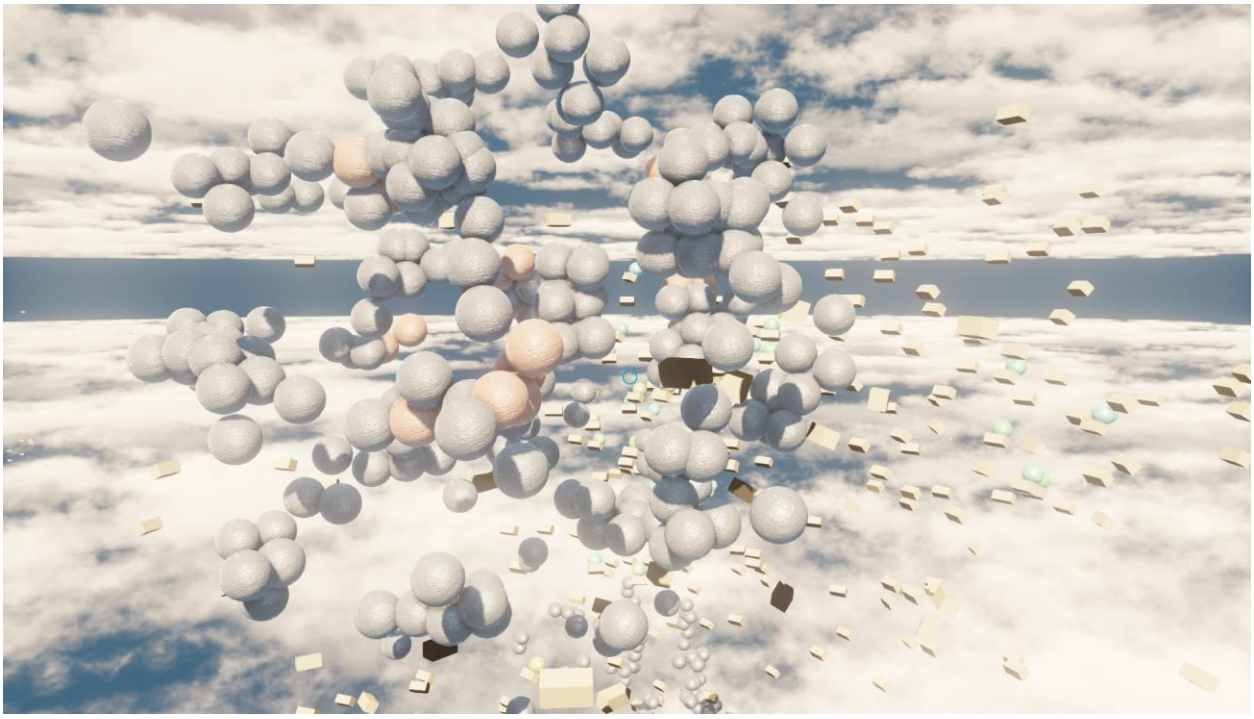
For these reasons, I rejected the use of random processes or artificial intelligence for *The Architecture Sings*. My instrument's virtual space has a perceivable and predictable relationship between input and output. I created an absolute correlation between my voice's frequency amplitude and the virtual architecture's cube size. The mouse and keyboard mechanism for navigating the virtual space also had a one-to-one relationship between input and output.

The experience of the performance

I find it difficult to gauge the actual experience of the performance of *The Architecture Sings*. During the performance, my mind was occupied with the minutia of my performative actions, as well as the technicalities of the installed equipment and the worry for their consistency. In reflection, after viewing a recording of the performance, what stands out to me the most is the relationship between the quality of my voice and the architectural structures which were correspondingly activated. The architecture vibrates, pulsates, and blinks together with the sound. The virtual space itself becomes musical. My singing during the first two sections of the piece may be a direct result of my fascination with Meredith Monk's *Dolmen Music*. I listened to that piece repeatedly while creating the digital software necessary to implement the instrument. But as the piece progresses, I wanted to devolve the music into more fundamental vocal sounds like laughter, thereby exposing the relationship between the cubes and the vocal frequencies as technical rather than stylistic. The feeling of the virtual structures as

musical entities morphs into an understanding of the structures as a system to visualize sound in general.

Brickolage



Description

Brickolage is an ongoing project that has not been shown anywhere outside of a critique. Yet, it occupied almost two full semesters of my time, was arguably my primary pursuit during the two years of my MFA studies, and remains of great interest to me. To improve the skills I needed for the project, I undertook an independent study with a population genetics laboratory, and wrote a paper titled *Brickolage: Visualizing Evolved Organism Phenotypes As Landscape Patterns*, which can be referenced for a detailed description of the technical system involved in

the work. The following link shows a video of a later stage in the development of the project: https://www.youtube.com/watch?v=xrwGi365ExU

Brickolage is an interactive, real-time, evolution simulation. It was created with the Unreal Development Kit game engine, so the user can enter the simulation from a first-person perspective and navigate the virtual space. The simulation is designed to visualize the genetic pattern of evolved virtual organisms through the spatial reorganization and patterning of a modular environment. There are only two elements in the simulation: bricks and organisms. Bricks are the building blocks of the environment. They are the only division of space, so they operate as the landscape. When the simulation starts, thousands of bricks are placed in the virtual world in an organized three-dimensional grid, with even placement between bricks allowing sufficient space for the organisms to navigate. Since there is no ground, the bricks remain suspended in midair wherever they are placed or moved. Organisms are represented as colored spheres. They absorb sensory information, navigate the environment, procreate, and move bricks. Their only properties are health, location, and the structure of their artificial intelligence system. The colored skin of the organisms visualizes their generation number and health. Using the HSL (hue, saturation, lightness) colorspace, an organism's hue is slightly shifted based on its generation, making each generation distinct and allowing for 50 generations before the color cycle is repeated. An organism's color saturation is tied to its health, so as they become less healthy they become more pale and gray. The entire simulation takes place in the void, floating in the sky, unattached from a predefined environment.

The crux of the simulation is the evolution of the organisms' artificial intelligence. Each organism is able to sense their environment, and take action based on that information. They sense what things (bricks and other organisms) are around them, how far away those things are,

and in what direction. This information is processed by their artificial intelligence system, which is called an evolutionary artificial neural network. Essentially, the input, which takes the form of numbers, is multiplied by a set of weights. The weights are specific to each organism and are an inherited mixture from the organism's parents, allowing for evolution. The output of the artificial intelligence system is also a number, or a set of numbers, used to dictate the organism's actions. The organism can move in three-dimensional space, pick up and move bricks if it encounters them, and mate with other organisms to produce offspring. But most importantly, the health of the organisms is a direct result of their surroundings, because it is one of the outputs of the artificial neural network. Whether or not an organism lives or dies is based on the circumstances of its surroundings, and it has the ability to move through those surroundings and manipulate them. By the very definition of the system, the organisms that survive will be the ones who are genetically optimized to manipulate the structure of their surrounding environment to match their genetic needs, which results in the environment manifesting as the phenotype of the organisms - that is, the physical realization of their genotype. Eventually, my goal is for the user to be able to manipulate the process of evolution of the organisms by affecting the structure of the artificial neural network.

Comments

The motivation for working on this simulation stems from my interest in videogames, systems, and evolution. *Brickolage* is not a videogame, but it is made in a videogame engine, and it was partially spawned from the most positive experiences I have had with videogames. I wanted to make a virtual space in which the user could have agency over the design of a landscape, but only indirectly through a mediating system. The mediating system filters and affects the decisions of the user to shape their experience.

Interactive system design for creative agency

I used the process of making *Brickolage* to examine what I enjoy in videogames. Games are frequently mistaken for the environment and interactive system in which they take place. A game is not a virtual world; it is the explicitly designed goal and rule set within that virtual world. When you play a videogame with an open virtual space to explore, you are only playing the game when you follow the rules to pursue designed goals set forth either explicitly, such as getting to the next character level and beating the game, or implicitly, such as beating your previous high score which was recorded by the game. Most commercial video games enforce their rules strictly. The only way to interact with the game is through a carefully-designed interface.

My best videogame experiences make me feel I accomplish something unique and special. Those experiences usually arise from complex open worlds I can explore and virtual systems with which I can experiment. I like forming my own clever strategy to overcome a hurdle, or subverting the game's design by exposing an unintentional quirk in its mechanics. I want to impose my own creativity on the game by disregarding either the rules, the goal, or both, and substituting my own. The reward for these achievements is intrinsic. My self-defined goals and my ability to achieve them are unacknowledged by the game because they lay outside of its predetermined structure. They are built on the system within which the game takes place. If the system is designed with a broad and flexible rule-set, it allows for and encourages creativity. The player must assert creative agency to devise his or her own goals. I designed *Brickolage* as a system that fosters player experimentation.

Evolution as a mediating system

To give the player creative agency in *Brickolage*, I created a toolset to enable them to

design compelling landscapes within which they can explore. I wanted the rules of the system to attract players to examine and manipulate the rule-set itself, and encourage them to be creative and constructive. Rather than allowing players to affect the landscape directly by moving bricks, I decided to create an intermediate system which serves as the interface between the players and the landscape. In order to assert agency, players must to engage with that indirect system.

I chose evolution as the intermediate system. Evolution simulations have been on my mind for years, perhaps due to my family. My father often interrogates phenomena from a standpoint of evolutionary biology. If someone is rude to him, he loquaciously expounds upon the survival advantages of rudeness in tribal society. My brother created a 'sim garden' computer simulation in which a species of virtual organisms gather resources, procreate, and die. Because the creatures (who were only represented as single pixels in a two-dimensional world) evolve, we can watch how small changes to the system design affect their development and behavior.

Imagine an ant colony that is simulated with time sped up by a factor of a million (11 days per second), allowing you to witness multiple generations in a matter of minutes. If, as god of the simulation, you place a recurring food source in a particular location, the ants best able to successfully navigate to the food will be the most likely to survive. Some complex and emergent behaviors may arise in even a system this simple. For example, some ants might defend the food source and kill any other ants that approach it. Conceivably, communities could form which support each other through physical defense and resource gathering. If you move the food source, or break it up into a dozen small chunks scattered around the simulation, how would that change things? And, what if you have control over the parameters of the ants' capabilities? You can take away their ability to fight, or give them grenades, or let them walk through walls. How

will that change the ants, and what sort of unanticipated behaviors will emerge?

Challenges

Evolutionary systems are incredibly complex, and fun to watch and tinker with. I conceived *Brickolage* as a way of directing that tinkering to indirectly create landscape or architectural patterns. But this project was full of challenges for me. It is by far the most 'out-there' art project I have ever undertaken because it shares so little with the rest of my work. It is interactive rather than controlled fixed-media. It's about ongoing tinkering rather than a single experience. The superficial visual appeal is almost nonexistent. And, perhaps most importantly, the process of creation is one of planning a system design and painstakingly implementing that design through programming, rather than intuitively reacting to found-object collage.

The process of using computer programming to make art is almost inherently an unintuitive one. It requires forethought and planning, and the temporal separation between inspiration and result can often be significant. Small mistakes can lead to complete failure when a program does not compile or has a bug that prevents it from carrying out its intended function. This is very different from a typical compositional process, either with pen and paper or on the computer, where the piece is going to play even if a few of the notes are unintended. It harkens in some ways more to the creation of a physical object with tenuous structural integrity. A small mistake can cause a collapse, ruining the whole project. Thankfully, in programming computers, the same small mistake, when corrected, can also immediately rectify the problem and restore functionality, rather than cause permanent damage.

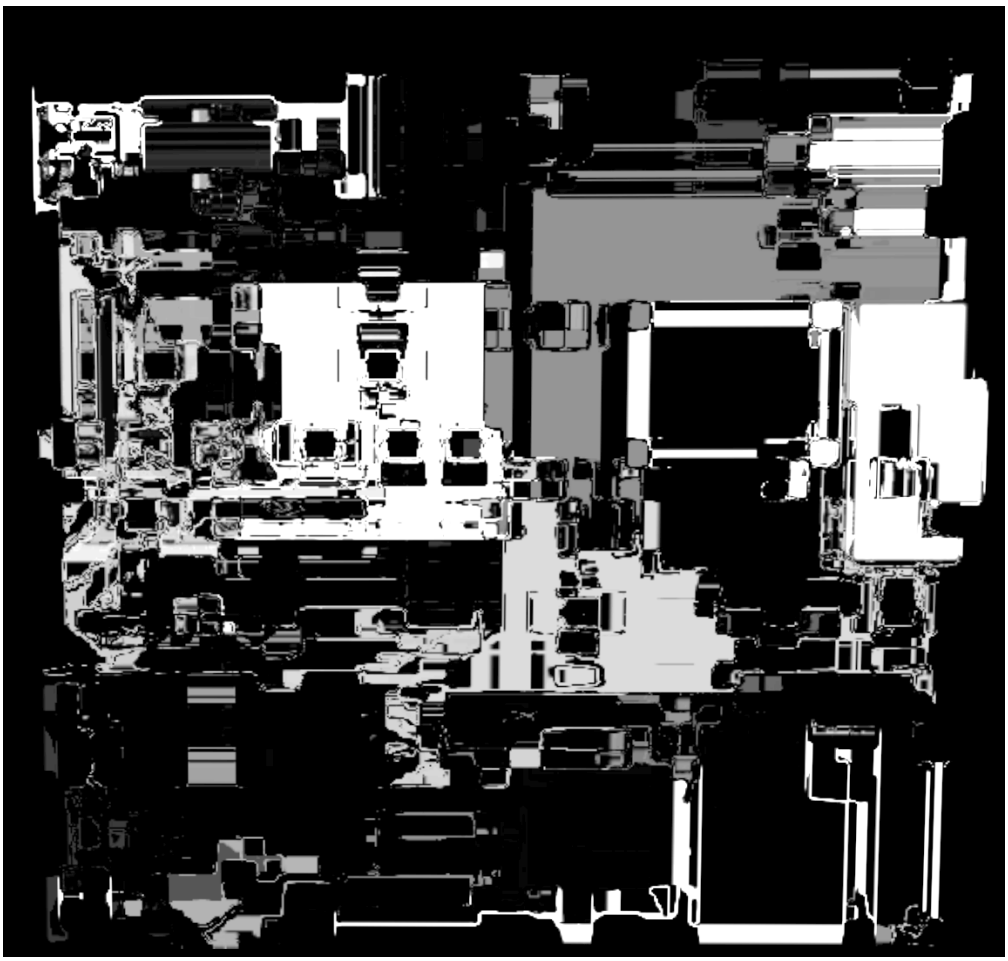
In the process of making *Brickolage*, I spent hundreds of hours at my computer, learning little bits and pieces of programming specific to the project. To create something with programming, you have to build iteratively, starting with a very simple skeleton and slowly

building one step at a time. But often, I ran into problems just in the construction of the skeleton that would take me days or even weeks to fully fix. Rather than struggling with creative issues like designing the system to be interesting or meaningful, I would slam my head against the wall just trying to get an organism to move in the right direction. I spent so much time learning the ins-and-outs of programming for the Unreal Development Kit that I almost lost track of what I was trying to accomplish. I enjoyed the problem-solving process of programming, but it was separated from the artistic product. The project frequently morphed from my original intent into feasible alternatives, and programming mistakes led to new paths of discovery.

The appeal of an experimental process

Brickolage is an ongoing process. In many ways, the work put into its creation reflects the goals of the project itself. Programming *Brickolage* put me in touch with the pleasure of experimenting with and engineering system design. Part of me wants to create a system that encourages others to do the same, which ultimately means they would step out of the system that I designed and make their own. But the locus of interest is always in the process of making and never in the completed project. If it were professionally feasible to spend my whole career constantly tinkering and never finishing, that's exactly what I'd do. The personal moments of discovery and inspiration that occur in my studio don't need to be encapsulated so they can be shared. *Brickolage* occupies a dual space. I am engaged with it as a never-ending process of personal discovery and creation. At the same time, I would like it to play a role in helping others find the reward of that process for themselves.

Circuit



Description

Circuit is a projection sculpture that was installed in the VCU Fine Arts Building Gallery September 22 thru October 19, 2013. The sculpture was a 4'H x 4'W x 3"D sheet of polystyrene cut by a CNC router on one surface and painted white. The shapes cut into the sheet were all

rectangles and squares of varying sizes and depths, and only 90 degree angles were present. The pattern somewhat resembled a circuit board. The sculpture was mounted on a wall with the central point approximately 7' from the floor, in a relatively dark space. Projected onto it was a constantly shifting pattern of rapidly flashing lights which were mapped to each individual square and rectangle. At some points during the eighteen minute projection loop, the lights were exactly aligned with the shapes of the sculpture. But they would also frequently dissolve into other patterns that bled and arced across the sculpture. The light constantly changed and evolved nonlinearly. The below link shows video documentation of the installed work: https://www.youtube.com/watch?v=D1dJsPeQdAI

Comments

The reason I first undertook this project was to build something physical by using my computer skills. I have a hard time building things with my hands, whether it's by using saws or drills or even just tape. But I'm a whiz with the computer, both in using software and in programming my own tools. So, I took a class to learn how to use a CNC router, and I wrote a program to quasi-randomly generate the rectangular patterns of the sculpture. The machine did the physical work for me. There were a number of problems in the cutting process, including the machine failing twice and completely ruining the sculpture once. Despite all the work, time, and frustration that went into the errors of the CNC router, it was gratifying to have a complex three-dimensional sculpted material that could be further integrated into other projects.

Projection mapping is something of a hot topic right now in the technology world because of its ability to use light to activate specific objects, and to distort the audience's sense of real space. Much like the CNC router, projection mapping appeals to me because it allows me to affect real space by using my skills with a computer to create moving images.

Using the three-dimensional model of my sculpture that I generated to use the CNC router, I created a program that aligned the virtual image of the sculpture, realized as projected light, with the actual physical sculpture. The program broke the virtual sculpture down into its component rectangles, allowing me to turn them on and off individually. By turning random batches of them on and off in quick succession, I was able to create the flashing lights. Then, I treated the whole image of the virtual sculpture as a live video, and processed that video using a number of real-time distortion effects which created the bleeding and arcing images.

During this process, I struggled with trying to create a meaningful experience as the end result of all this programming. I didn't want the piece to be about the techniques of projection mapping, or about the concept of what it means for a virtual and real world to interact. I wasn't interested in the implications of the interpretations of the light as electricity, or as a city seen from above. In retrospect, perhaps it was a bad idea to name the piece *Circuit*. I wanted the piece to communicate a more visceral sensation - a feeling of electricity and energy like the sensations that arise from listening to noise music. In the end, I wanted the piece to feel musical rather than sculptural.

This is true for a great deal of my work. Having studied and worked as a musician for two decades, I have a deep affinity for that process, and that way of understanding the world. Music has a rhythm and flow to it that is generally unlike what comes out of the visual art world, whether it be sculpture or film or painting or video. Almost everything I do ends up feeling musical, perhaps with the exception of *Brickolage*.

But using a process heavy on programming made it difficult for me to feel satisfied with the rhythm and musicality of *Circuit*. I never came to terms with the nonlinear presentation of

the light patterns, and that made it difficult for me to find the right amount of ebb and flow to the speed and distortion of the flashing light.

nothings_nomeanings

Description

nothings_nomeanings is a single-channel fixed-media found-object collage video. It was installed as a projection with stereo sound in the VCU Depot April 25 - May 17th, 2014. The installation served as the exhibition portion of my MFA thesis. The projection was long and thin, stretching from 11' wall to wall. At an aspect ratio of 48x9, it was triple the normal width of a typical widescreen video. Originally, I had planned from the projection to seamlessly cover three contiguous walls, with each third of the video occupying an entire projection. This would have created an environmental projection space into which the audience could move and be nearly surrounded by video. Due to technical issues, it instead was shown through a single projection. The video was played on a continuous loop with no apparent loop point. A linear version can be viewed here:

https://www.youtube.com/watch?v=yO2E3eZFLcE&feature=youtu.be

Comments

Elements of collage, style and process

In many ways, *nothings_nomeanings* is a continuation of the work I was doing before beginning my studies at VCU. I have worked with found-object media collages for over a decade, first in music and then in video. Many of the stylistic characteristics of that work, as well as the aesthetic goals, remain the same in my thesis piece. Found-object media is collaged together to create gestalts in which the individual samples merge together. The samples are not referential to their particular origin points, nor do they create a narrative story of events. The piece is dense, with many events occurring simultaneously, to the point of perceptual saturation. It was created intuitively, using a process of focused listening and reaction.

Found objects are inherently referential in a multitude of ways. I will use the sample of Arvo Pärt's *De Profundis*, beginning at 1'25" in the linear video of *nothings_nomeanings*, as an example. When heard by itself, outside of the context of my piece, the sample references a multitude of things and ideas. It references the particular musical work *De Profundis*, Arvo Pärt in general, the classical orchestra with choral ensemble, the neo-romantic style, the particular performers who played the work for the recording, that particular recorded performance, their style of performance, the style of recording, etc. It also haphazardly references all the unique times and places that each individual listener has heard *De Profundis*, this particular recording of the work, and their associated feelings and experiences. In my use of this sample, I am only interested in using some of these aspects of reference, and so I work to hide the rest. Considering the above example, I want the audience to perceive the general types of references: the classical orchestra and choral ensemble, the musical style, the style of performance, and the style of recording. But I attempt to disassociate the sample from its particulars, so the audience

does not recognize the sample as deriving from *De Profundis*, or as a work of Arvo Pärt. This method allows me to utilize samples as a building-block of musical material that is laden with meanings that are sometimes shared across audiences, and sometimes unique. It is simultaneously devoid of any social commentary wrapped up in the origins of the samples. I want the listeners to remember all their associations with neoromantic music (which for the majority of the audience might be generalized to classical music) without worrying about whether or not that symphony was a political statement, or that they particularly dislike that composer. I use several techniques to accomplish this. Some samples I keep short enough that they are unrecognizable. I frequently layer the samples thickly on top of one another so that they are occluded, reducing recognizability. I can use these techniques to disguise music that may be specifically known to the audience. But with the video samples I use, I have found that their specific identities are more resilient. As a result, I am usually careful to only sample media that will generally be unrecognizable to the majority of people, like old documentaries. Some samples will be recognized here and there by some people who happen to have close knowledge of that particular recording, but for the most part their origins will go unperceived.

I am also uninterested in any story that might perceptually arise from the combination of samples. At 2'22" in *nothings_nomeanings*, in the center of the screen, a video of an SUV driving in the snow is accompanied by a video of a building with windows, and a video of pink flamingos. I am not creating a narrative about the increasing occurrence of wildlife in urban environments. Perhaps that narrative, or another, will arise in the minds of the audience, but I believe that it will eventually dissipate. As the audience spends more time with the piece, viewing it on multiple occasions, any constructed narrative will inevitably break down because it has no legs to stand on.

For example, at 1’42” in the linear version of *nothings_nomeanings*, there is a music sample of Alan Hovhaness’ *The Flowering Peach*. The most salient characteristic of the sample is the notes of a vibraphone. They are somewhat buried in the mix of other sound, but are nevertheless critical to holding the gestalt together. The apparent musical content of the sample can be described as four of five notes, including their pitch and slow rhythm, their subsequent resonance and vibrato, and the timbral nature of the vibraphone itself. But there is so much more at hand. The particularities of that recording of *The Flowering Peach*, although not referential in my usage, are still existent. It was performed by the MGM Chamber Ensemble conducted by Hovhaness himself, so the style of playing is unique and may differ from the interpretation of another ensemble. The recording was made in 1955 and pressed on vinyl, so the sample has a distinct analog sound, accompanied by a hiss. These elements are just as important to the character of the sample as the pitches and rhythms. They have an inherent beauty which I do not distort by altering or filtering.

The unique character of each sample, as the amalgamation of its content and medium, allows me to make my compositional process about the creation of texture rather than discrete events. I can focus on the layering of a particular techno melody sample above a particular choral sample above a particular sample of a concrete block dragged across a grated floor. The synth notes flutter over the bed of the lugubrious harmony of the choral sample, colored by the noisy unpredictability of the concrete block. The samples are from disparate sources, represent diverse styles, and activate different portions of our listening comprehension, yet they can fit together seamlessly. I meticulously combine samples both linearly and vertically to create new sonic entities. Musical lines are created out of samples placed end-to-end, each sample blending into the previous and leading directly into the next. The samples are perceived both as individual

objects and as part of a continuous phrase, forming a swiftly shifting collage of characters. Samples are also thickly layered in conglomerative clusters, carefully blending so that no single sample is dominant but all the sounds remain present and audible. I use the term 'gestalt' to describe my goal for samples to retain some of their original identity, but in combination to surpass that identity and form something startling and beautiful. The samples' individual identities are subsumed into a new, emergent whole.

In creating these gestalts, I enjoy making my pieces extremely dense, with many events occurring in a short time. Much of my favorite art is visually and sonically complex, forcing me to experience it repeatedly to pick up the multitude of details and fit them together. This sustains my interest in the piece and it inspires me to 'come to' the work by actively working to understand it. Density also helps to hide the particular references of individual samples, and to help their identities recede so that they might form gestalts.

My compositional process in creating these collages is intuitive, which is well-suited to working with found-objects. A sample always already has something there, both in terms of the discrete content of its pitches, rhythms and instrumentation, as well as an ineffable character that encompasses our personal, cultural, and human relationship to the content of the sample. These things exist before and without any inspiration or creative act from me, and so are very appealing when used with an intuitive and reactive process of composition. Working with samples is almost like improvising together with other people. From the beginning of a piece, I don't need to start with an idea because the first sample I come across or choose already has content to which I can react. When I look for the next sample to integrate with the first, the choice is based on whether or not the second sample fits well with the first, and if it leads in an interesting direction. By including a sample, I can exert fine-tuned control over it by precisely adjusting its

volume, fades, duration, and placement. I can lend it a new context which fundamentally alters the character of the sample. But the sample also gives back to me something unanticipated, delightful, and inspiring to which I can respond. No matter how much power I wield over the sample, even if I were to try to fit it into a preorganized structure, it never works quite the way I imagine it will. It has its own vitality.

This concept of intuitive process might be understood as a strange mixture of Zen Buddhism and objective realism. On the one hand, it contains the idea that the I, as the composer, must shed my ego and remain totally open to what is present in the piece. It is a meditative practice of quieting the mind and maintaining absolute focus. On the other hand, the same practice also suggests that through this process the composer can become in touch with the objective content of the piece - the idea that is being communicated. It disregards any relativist notion that the construction of the communicated idea occurs in the listener. I like working this way, I like the energy that courses through me (and is eventually drained) as I focus, and I believe it helps me remain in touch with the way my work may be perceived by others who are devoting energy to the work as an audience.

I also believe that an intuitive approach facilitates the creation of emergences, where a structured and formulaic compositional process does not. Some of my favorite moments in art occur when a piece seemingly departs from the original or dominant theme/content/idea, and yet there is something inexplicable that ties it together. My favorite example of this is the piece *Fanfare* by Noah Creshevsky. The first several minutes of the piece are composed with two plunderphonic samples, one of brass and the other of a solo female voice. The samples are modulated to various pitches to create musical lines. Then, unexpectedly, dramatically, stunningly, those samples are abandoned and instead, a multitude of R&B pop music samples

take their place and are in turn developed. It is a gorgeous moment. There is no amount of music theory that can explain how the second section is related to the first and why they belong in the same piece. They are stylistically related, in that they both use modulated samples, but so does all of Creshevsky's music, so that's not enough to logically justify the combination of the two sections. And yet, there is something in me, and probably in Creshevsky as well, that recognizes a connection between the two. There must be some sort of deeper, underlying pattern. If we describe language and art-making as creating humanly-recognizable patterns out of material, then this links two patterns in a way that defies language's ability to describe the connection. It is creativity at its utter best, allowing us to see the world in new ways we would never be able to reason out. These moments are what I refer to as emergences. I work intuitively to reach them, because plans are difficult to exceed or break free from. When working with a premeditated structure, I find it difficult to notice when the opportunity to make new connections arises. When working from a plan, my mind is focused on its implementation and closed to other possibilities.

What has changed in the collage work

Many of the aspects of my collage work described above have been true for a number of years, even if I am more capable of explaining them now than ever before. But it is also useful to examine what has changed during my MFA studies.

nothings_nomeanings is different from any collage I've made before because it is looped in an installation rather than presented in linear format in a festival or concert. I used to think of the linearity of my work as one of its defining features. It allowed me to guide the audience through a particular experience by introducing them to an idea in one way, developing that idea, and then trying to coherently change it in order to leave the piece in a completely different place

from where it started. If I could stumble across an emergence, as described earlier, that was a crowning achievement for me. But installation work inherently cannot accomplish that because the audience can enter at any point. I wanted to create something that has just as much power as an emergence, but didn't rely upon a linear experience. There's a point in the work when the music fades away into silence for over a minute, and then the video reaches a short stand-still. My hope is that this section achieves a quasi-emergence. In some ways, I think that section would be even more effective if it was reached linearly near the end of the piece. When I made the piece, I experienced it linearly because making the loop point was the very last thing I did, so the intuitive reasoning for the silent and still space was driven by that reaction.

A stylistic difference between *nothings_nomeanings* and my previous collage work is that the samples in my thesis work are much longer and slower, with lower density. The music samples were chosen for their slow tempo or lack of variation over ten to twenty seconds, allowing each gestalt to be drawn out and experienced for that period of time. The video samples were mostly time-stretched, because I had difficulty finding enough video with long shots and little variation. The time-stretching gives much of the video a sense of slow motion. The movements inside the videos become slightly less than real. Another side-effect of using longer samples is that they are more recognizable, because the audience has more time to comprehend them, or because more of the original video is being played. I found that in general, a well-placed sample, when contextualized in just the right way, can retain some of its referentiality without creating an unwanted sense of medley. That is, the samples are being used in a completely new context that subverts or changes their character, rather than being used for nothing more than their identity.

Another difference, although not apparent in the final incarnation of the installation, was

my intention to have the piece projected onto three walls. This idea spawned both from a fascination with the technology necessary to achieve this feat, as well as a desire to spatially spread the visual element of the work across a space in which it couldn't be perceived and comprehended all at once. I didn't want the video to appear in totally separate spaces or rooms, because I needed it to retain holistic unity. I was hoping the experience of having to look at different walls to see different portions of the piece would both enhance the details of the piece's gestalts, as well as encourage the audience to experience the piece multiple times by looking at a different wall each time in order to assemble the totality of the work in their minds.

Melted Thoughts

Most of my ideas presented above have fully formed, coherent, supporting arguments. These thoughts are a deep part of me, but they are constantly updating, shifting, and even reversing. In this chapter, I will present some of the ways my ideas are changing, up to and through the point of writing this essay. They are vague notions mixed with clear insights. They are hints of where I may be going.

Previously in thinking on the referentiality and character of samples, I lacked a way to articulately distinguish the objects represented in the samples from the representation of the objects through their medium of recording. This especially raised issues with my rejection of narratives in the work. I felt the work was not about the objects themselves, but was unable to provide a feasible alternative. I now have a way to verbalize my thoughts on this issue, especially with relation to the nature of video samples. For me, such images are only quasi-representational. My favorite example is of a collage I completed before attending VCU called *Relentless Spasms of Restrained Serenity*. This collage contains a video sample from a nature documentary of a lone duck flying in a blue sky, partially blocking out the sun. The use of this video sample is not a direct reference to the subject material of the original video. That is to say, I don't use it to talk about ducks, comment on ducks, or create a story about ducks. The video of the duck is representing exactly and only itself. We recognize the duck as a duck, but more

specifically we recognize the way we are relating to the duck through the style and medium of a nature documentary video. Seeing the sample of the duck doesn't first and foremost remind of us of ducks, it reminds us the way we've seen ducks portrayed in nature documentaries. As media savvy, media inundated beings, we intuitively recognize and latch on to the medium of communication. The video has an implicit emotional quality, which in this case is imbuing the duck soaring in the sky with majesty. Majesty is not a property of the duck as the subject material; the majestic quality is entirely constructed by the original author of that video. I did not use the sample to comment on whether or not ducks are majestic. Instead, inherent in the use of the video as a sample is a tip of the hat to (rather than a comment on) the way in which video allows for the construction of a majestic quality onto a duck. In my work, that acknowledgement is implicit. My use of the video is not meant to be a critique of the way video as a medium creates artificial constructs, such as instilling majesty into a duck. Instead, I use and build upon the imbued majesty that exists as a property of the sample, as part of its character, to create something else entirely. And that usually happens by combining that character with a very different character from another sample, so they form a gestalt.

I am more open now to the vast variety of personal interpretations, memories, and feelings that found-objects evoke in individual members of the audience. There is something lovely about the myriad flavors of nostalgia and the imaginary conjured spaces and environments that my sample gestalts elicit. If someone is absorbed in this sort of experience while viewing my work, then I think they are putting effort, energy, and focus into the experience, which is really what I want the most from my audience.

The soundscape of my thesis work is less diverse than most of my other sound collages have been in the recent past. In those collages, I felt it was important to use samples drawn from

a wide array of origins, such as jazz, techno, Javanese gamelan, and Ghanian drumming, in order to emphasize the uniqueness of gestalts created from such disparate elements. But *nothings_nomeanings* adheres to a fairly rigid core of music samples, with piano, choral, and string samples of classical, romantic, and neo-romantic western music. I have a deep affinity for traditional western instrumentation, possibly because I spent my formative years learning and performing that kind of music. While there is a part of me that feels the musical gestalts would have been stronger if I had diversified, I intuitively feel that it was appropriate for this piece. I can't put my finger on why, yet.

As I was composing *nothings_nomeanings* I stumbled upon a new way of conceiving the utility of combining natural sound samples and music samples, which I've been doing for years. The natural sound samples are imbued with an emotional quality from the music, and the music samples take on a concretely representative quality from the natural sound samples. Natural sound samples by themselves tend to evoke thoughts of whatever object created the sound. A sample of a sliding door shutting may bring to the minds of the audience images of sliding doors they have known in the past. And a music sample of a Brahms chorale may evoke feelings of spiritual transcendence. But when the two are combined effectively in gestalt, they take on each other's properties. I take the most pleasure from these moments, when the sliding door fleetingly reaches spirituality, and the chorale inhabits an ephemeral physical space. I believe they have the same sort of convulsive beauty that inspired Surrealists to combine dream imagery.

Perhaps one of the most powerful changes in my thinking involves the questioning of my intuitive process. I'm concerned that the idea of intuition is a complex bit of self-deception. I think a lot about the role that self-deception has for humans, how it manifests itself, and philosophically what self-deception even means. In my own artistic process, I have to admit to

myself that I make all sorts of premeditated choices. For example, I choose what software to use, which hugely influences what techniques I employ because they suggest themselves in the software design. My sample library is largely collected ahead of time because it is important to have a diversity of samples so I can pick which ones will be appropriate for any particular moment of my piece. But even then, I'm making a vastly important choice that defines the work. If I only take video samples from documentaries, then that choice cannot be reactive to the emergent content of the piece as I create it. I generally allow these premeditated choices because they tend to dictate the style of the piece rather than the content. However, style and content are fundamentally interwoven, like the medium and the message. The content of each particular piece, the idea and experience that is communicated, is dependent upon software and sample-choice. But the development of the idea isn't hampered by those limitations because they define the stylistic space within which the piece exists. At some level, at some point, decisions have to be made before the process of focus and reaction to content can begin. For example, I may choose to write a piece of music for the piano, and the style of the piece will be limited by the nature of the piano, but the development of the musical content is a layer below that, and happens within that structure.

The self-deception of my intuitive process is further illuminated by my tendency to formally analyze the work. In creating one of the middle sections (when viewed linearly) of *nothings_nomeanings*, I was struggling to create sound that I felt was affectively linked with the beginning of the piece. In order to overcome this barrier, I found myself analyzing and detailing aspects of the first section, hoping that I could use the findings to make appropriate choices for the middle section I was working on. That process goes completely against the idea of intuitive creation, but I used it because it allowed me to continue moving forward in the piece.

Furthermore, I don't know how I should react to my discovery of self-deception. Do I alter my compositional approach to allow for premeditation and analysis, alter the way I talk and think about my approach, or assume that my approach is solid in general? Perhaps on the occasion in question I resorted to analysis only because I wasn't putting sufficient energy into the intuitive process to yield results.

My reasons for using an intuitive process rest upon my philosophy of semi-objective realism, but that philosophy is also shifting. A philosophical model called object-oriented philosophy provides me with a framework to reinterpret my ideas of realism. I encountered this philosophy as part of a class called Objects of Affection that I took as my seminar in my final semester of my MFA studies. Object-oriented philosophy, as my understanding of it goes, posits an absolute reality which is forever withheld from our total understanding. There are real objects which have real properties, but because of the nature of the universe we can never completely comprehend those objects because we are not those objects. Real objects are all also equally withheld from each other; in this conceptual model, humans are not uniquely privileged as unintegrated elements of existence. Instead of having direct knowledge of and access to each other, objects are mediated through something called a sensual object, which is not real. Sensual objects come into being through the phenomenological perception of real objects. A sensual object exists between two real objects, and is just as much a thing as a real object, with agency to boot. Furthermore, real objects are not limited to the physical world. My family, for example, is a real object. Like any object, it is constantly in flux, but it maintains cohesion and existence even if one member of my family leaves or dies.

This philosophy resonates deeply with me, partly because I am able to find some interesting connections with my pre-existing philosophy of art and semi-objective reality. I react

very strongly against the continental philosophy that dominates the academic art world which holds that all understanding is a result of our enculturation, and that objects, words, and art have no reality beyond the meaning endowed upon them by our cultural network. The idea of even a semi-objective reality is seen as a pretentious, male, Caucasian concept used to disempower everyone that is not those things.

Object-oriented philosophy provides an alternative to counter relativism and associative meaning. There are real objects. My thesis piece is a real thing that has real properties. None of us will ever be able to totally grasp the real art work, perhaps especially me as the artist. But the sensual objects that each of us have in relation to the piece are derived from both the individual and the real object. Perhaps the meditative focus of my intuitive compositional process is a way of grasping for the real object, striving to bring my sensual understanding of it closer to the real thing. I like that thought.

Conclusion

In some ways, the process of writing this essay reflects my struggle with intuitive and personal process versus structuralism and engineering. My first draft attempted to distill all my ideas down into their essence, starting with the definition of art, in order to dialectically build an argument for my ideas about art with total cohesion and infallible persuasion. I tend to write that way because I tend to think that way - always rationally analyzing phenomena to order and define them. My thesis committee strongly suggested that I take an alternate route, understandably concerned that it might be unproductive to spend my time trying to construct a flawless abstract argument rather than directly engage with my art work and creative process. I then rewrote the essay as a semi-personal narrative going back over a decade, contextualizing my ideas by tracking their development. That was an invaluable process for me, even though it may not have been appropriate for this thesis. I finally settled on this piece-oriented approach which allows me to consider many of my ideas in specific relation and application to the major works that I created while at VCU. This essay formally asserts some of the philosophical concepts upon which my artistic process is built, but it also acknowledges some of their shortcomings, and tries to grapple with my inconsistencies. By incorporating some of my hesitations, worries, hypocrisies, and contradictions, I hope that it finds a middle ground. From the middle, I can continue the development of my artistic practice by drawing upon the strength of my analytical

brain to create structure, while allowing my intuition to find and embrace the inevitable irrational gaps, creating doubt. It is from this doubt that my next piece will always arise.

Appendix 1

Some Published Works That Are Important To Me

Arvo Pärt – Te Deum
Autechre – Quaristice
Carl Stone – Shing Kee
Claude Debussy – La Mer
Diamanda Galas – Malediction & Prayer
Erik Satie – Gymnopedies
Gustav Mahler – Symphony No 5 in C sharp minor
Graham Harman – The Quadruple Object
Henry Gwiazda – She's walking…..
Iannis Xenakis – Shaar
Igor Stravinsky – The Rite of Spring
James Pritchett – David Tudor's Realization of John Cage's Variations II
Jane McGonigal – Reality is Broken: Why Games Make Us Better and How They Can Change the World
John Wall – Constructions I-IV
Laetitia Sonami – The Appearance of Silence
Lisa Bufano – One Breath is an Ocean for a Wooden Heart
Marco Donnarumma – Hypo-chrysos
Martin Arnold – pièce touchée
Meredith Monk – Dolmen Music
Merzbow – Animal Magnetism
Morton Feldman – For Piano and Voices
Nine Inch Nails – The Downward Spiral
Noah Creshevsky – Who
Norman McLaren – Pas de Deux
Pauline Oliveros – Bye Bye Butterfly
pe lang – moving objects series
Philip Glass – Einstein on the Beach
Radiohead – Kid A
Richard Garet – Gap
Robert Ashley – Perfect Lives

Robert Seidel – Chiral
Ruth Crawford Seeger – String Quartet
Sony Online Entertainment – Everquest
Stan Brakhage – The Stars Are Beautiful
Steve Reich – Piano Phase

Vita

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